



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,377	03/30/2004	Mai H. Loc	P18194	4695
28062 7590 07/17/2006				
BUCKLEY, MASCHOFF, TALWALKAR LLC				
5 ELM STREET				
NEW CANAAN, CT 06840				
			EXAMINER	
			PATEL, RAJNIKANT B	
ART UNIT		PAPER NUMBER		
2838				

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/813,377

Applicant(s)

LOC ET AL.

Examiner

Rajnikanth B. Patel

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10-13 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-13 and 15-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-7,10-13,15-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4,10-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elbanhawy (U.S. patent # 6,449,174) in combination with Rich, III (U.S. patent # 4,967,201) and Tabaian et al. (U. S. patent # 7,027,944).

Elbanhawy disclose the claimed subject matters an apparatus (figure 1), including a voltage regulator with N-phases (Abstract, line 1-5). However Elbanhawy does not disclose the utilization of the technique for a substrate in which the first one of the N phases is located is less thermally sensitive than a second area of the substrate and first one of phases to generate more heat. Rich, III teaches the utilization of similar technique for a substrate in which the first one of the N phases is located is less

Application/Control Number: 10/813,377
Art Unit: 2838

thermally sensitive than a second area of the substrate (Abstract, line 1-30) and Tabaian et al. teaches the utilization of the similar technique for a first one of phases to generate more heat (column 1, line 20-25). It would have been obvious one having an ordinary skill in the art at the time the invention was made to modify Elbanhawy's apparatus by utilizing the technique taught by Rich, III and Tabaian et al. for the purpose of providing thermal protection to circuit components.

3. Claims 5-7 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Change (U.S. Patent # 6,218,817) in combination with Elbanhawy (U.S. patent # 6,449,174) and further in combination with Rich, III (U.S. patent # 4,967,201) and Talbot (U.S. patent # 6,865,682 B1).

Change discloses claimed subject matters a system (figure 4), including a microprocessor, a double data rate memory (column 3, line 1-5), a voltage regulator (figure 4, item 30). However Change does not disclose the utilization of the technique for a voltage regulator converter, wherein the first current is different from the second current and a motherboard coupled to microprocessor. As explained in the claims 1-4, 10-13 and 15, above, teaches the utilization of the similar technique for a voltage regulator converter, wherein the first current is different from the second current and Talbot teaches the utilization of the similar technique for a motherboard coupled to microprocessor (figure 1). It would have been one having an ordinary skill in the art at the time the invention was made to modify Change's system by utilizing the technique taught by Burstein et al. and Talbot for the purpose of improve the efficiency of the system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rajnikant B. Patel whose telephone number is 571-272-2082. The examiner can normally be reached on 6.30-5.00; m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Rajnikant B Patel
Primary Examiner
Art Unit 2838
